

FENSA Guidance Notes (2)

Replacing Vertical Sliding Sashes

When replacing vertical sliding windows it is important that compliance to Approved Document N (Safety) is achieved and that the replacement windows do not make the situation worse in the cases of Approved Document F (Ventilation), and B (Fire Egress). Unless the existing window exceeds current Building Regulations regarding Approved Document F (Ventilation), and B (Fire Egress), in which case both can be reduced to comply with the existing regulation.

Example

The surveyor is called to a house fitted with a wooden vertical sliding sash window in an upstairs habitable room measuring 4m by 4m as shown in Diagram 1.

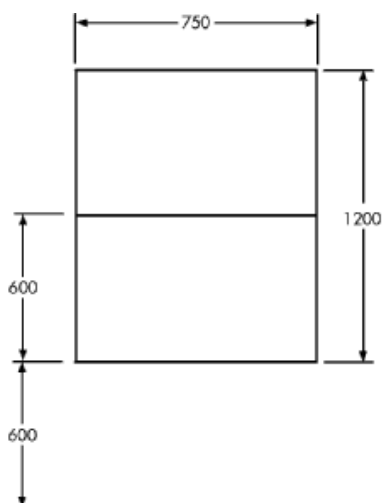


Diagram 1: Vertical Sliding Sash (Box Sash)

The customer requires the external appearance of the window to be fundamentally the same and requests a PVC-U top hung vent over a fixed light as shown in Diagram 2.

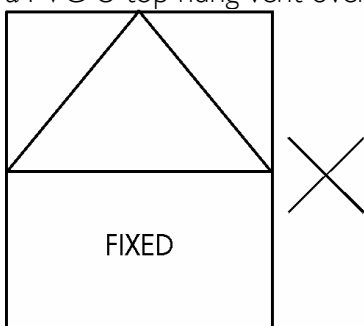


Diagram 2 – This solution will fail (Fire Egress)

Approved Document F - Ventilation

1. Rapid Ventilation

The original window provided 0.45m² of rapid ventilation (less than required for new build regulations 4m x 4m x 1/20 = 0.8m²) by opening the top sash. The new window can provide rapid ventilation by opening at the top (see Diagram 2) and providing that it opens wide enough will ensure that rapid ventilation is not made worse.

2. Background Ventilation

As the original window did not contain trickle vents, nor was it capable of being locked in the open position, it did not provide background ventilation. The design of the window in Diagram 2 is acceptable in this respect but fails in other respects. If a background ventilation facility was originally available then the replacement window would need to be fitted with either trickle vents or a lockable night vent so compliance would be maintained (see comment below on rapid ventilation).

Approved Document N – Safety Glazing

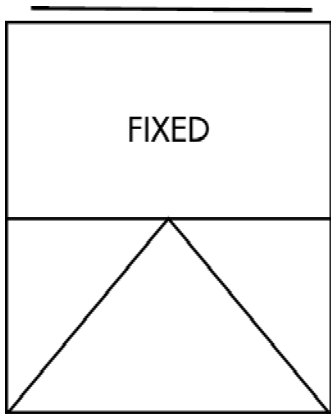
The replacement window is less than 800mm from floor level and therefore the lower sash needs to be fitted with safety glass to BS 6206 2005: Pt 4.

Approved Document B – Fire Egress

1. Fire Egress

The original window provided a clear opening 600mm high and 750mm wide at height of 600mm from the floor. This more than satisfied the size requirement for a fire egress window in a new build situation (i.e. 0.33m² with a minimum dimension of 450mm). The replacement window (Diagram 2) can, dependent upon the type of hinge used, maintain the size of opening required for egress. However because symmetry is required the transom height will be above the 1100mm level. (This height is the maximum required for a fire egress window to comply with the legislation.) Therefore the window in Diagram 2 fails fire egress compliance (it makes matters worse).

The window in Diagram 3 meets the fire egress requirements providing it can be opened far enough and the cill does not restrict the clear opening. The current Building Regulations call for the cill level of a fire egress window to be between 800mm and 1100mm from floor level. In this example the cill is at 600mm from floor and would fail if it were a new installation, but since the window exists matters are not being made worse and therefore the bottom opener can act as a fire egress. However, it fails Approved Document F because rapid ventilation over 1750mm is not available.



✓ and ✗

Ventilation (see notes)

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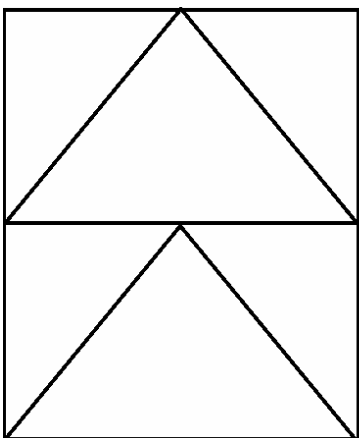
Egress

Diagram 3

If a trickle vent is fitted with the replacement window then we do accept this as an alternative to rapid ventilation. In these circumstances therefore Diagram 3 meets requirements. It is however not the ideal solution (see Diagram 4).

Summary - Options available:

1. Revert to a vertical sash design.
2. Lower the height of the middle transom to be below 1100mm if a top opener is preferred and therefore Approved Document B (Fire Egress) compliance is achieved. It can also then provide rapid ventilation because part of the opening will be above 1750mm.
3. Fit a fixed over an opener (Diagram 3) with trickle vents in the head of the window to provide high level ventilation.
4. Re-design the window to have two top opening vents, one above the other (see Diagram 4). This fully meets the requirements for ventilation and fire egress providing the cill does not prevent the required opening size being achieved with the lower opener. The minimum width of opening needs to be 450mm in this particular example.
5. Re-design the window to be one single top hung opening measuring 1200mm x 750mm if suitable hinges are available.



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Diagram 4

For further information on these Guidance Notes, contact the FENSA technical helpline on 0870 850 9957 or email techhelp@fensa.org.uk

You can also consult the FENSA Surveyor's Guide.